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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,906	07/31/2006	Hisayoshi Mizugaki	1204.46397X00	3519
20457 7590 12/20/2007 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER CHEN, SHIH CHAO	
			ART UNIT 2821	PAPER NUMBER
			MAIL DATE 12/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/587,906

Applicant(s)

MIZUGAKI ET AL.

Examiner

Shih-Chao Chen

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/31/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on July 31, 2006 has been considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohta et al. (U.S. Patent No. 5,278,569).

Regarding claim 1, Ohta et al. teaches in figures 3-9 a triplate-type planar array antenna [10] comprising: an antenna circuit board (See FIG. 3 (B)) on which an antenna circuit including a plurality of radiating elements [4], which are vertically and horizontally arrayed in a two- dimensional manner, and feedlines [5] is formed; two pieces of dielectric substances [2, 21] between which the antenna circuit board is sandwiched at the both sides; a ground conductor [1] laminated on one dielectric substance [2]; and a slot board [11] laminated on the other dielectric substance [21], wherein the slot board

has a plurality of slot openings [3], each corresponding to the plurality of radiating elements with a linear arrangement.

Regarding claim 2, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 1, wherein the plurality of slot openings [3] are formed on the slot board [11] in series in the longitudinal direction of the slot openings.

Regarding claim 3, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 2, wherein a plurality of antenna circuits (See FIG. 3 (A)) are formed on the antenna circuit board, the plurality of slot openings [3] are formed on the slot board [11] in series in the longitudinal direction of the slot openings, and the number of the plurality of slot openings corresponds to the number of the plurality of antenna circuits.

Regarding claim 4, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 1, wherein a plurality of antenna circuits (See FIG. 3 (A)) are formed on the antenna circuit board, and at least one slot opening [3] extending over at least two of the antenna circuits is formed on the slot board [11] in series in the longitudinal direction of the slot openings.

Regarding claim 5, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 1, wherein each array spacing [d] for the plurality of slot openings [3] in a direction perpendicular to the longitudinal direction of the plurality of slot openings is set at 0.85 through 0.93 times a free space wavelength corresponding to a center frequency of a frequency band in use (See Abstract).

Regarding claim 6, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 1, wherein each array spacing [d] for the plurality of radiating elements [4] in the longitudinal direction of the plurality of slot openings [3] is set at 0.85 through 0.93 times a free space wavelength corresponding to a center frequency of a frequency band in use (See Abstract).

Regarding claim 7, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 4, wherein each array spacing [d] for the plurality of slot openings [3] in a direction perpendicular to the longitudinal direction of the plurality of slot openings is set at 0.85 through 0.93 times a free space wavelength corresponding to a center frequency of a frequency band in use (See Abstract).

Regarding claim 8, Ohta et al. teaches in figures 3-9 the triplate-type planar array antenna according to claim 7, wherein each array spacing [d] for the plurality of radiating elements [4] in the longitudinal direction of the plurality of slot openings [3] is set at 0.85 through 0.93 times a free space wavelength corresponding to a center frequency of a frequency band in use (See Abstract).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Thursday from 7 AM to 5:30 PM, Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571) 272-1662. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shih-Chao Chen
Primary Examiner
Art Unit 2821

Shih-Chao Chen
SHIH-CHAO CHEN
PRIMARY EXAMINER

SXC
December 10, 2007